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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,566	05/10/2001	Manfred T. Reetz	STUDIEN 282-	6932

7590 09/26/2002

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EXAMINER

LOVERING, RICHARD D

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 09/26/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/831,566

Applicant(s)

REETZ ET AL.

Examiner

LOVERING

Group Art Unit

1712

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

## Status

- ☒ Responsive to communication(s) filed on MAY 10 & AUG. 24, 2001
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 21-45 is/are pending in the application.
- Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 21-45 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☒ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.
- ☒ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_ ☐ Interview Summary, PTO-413
- ☒ Notice of Reference(s) Cited, PTO-892 ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948 ☐ Other \_\_\_\_\_

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

*COPY  
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FEB 20 1997*  
3. Claims 21-24, 26-30, 32, 33, 35 and 37 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Moumen et al. "New Syntheses of Cobalt Ferrite Particles in the Range of 2-5 nm . . ." Chem. Mater. 1996, 8, 1128-1134, esp. Abstract; and page 1129, II. Experimental Synthesis. *ABSTRACT: Cobalt ferrite particles were synthesized by a sol-gel process. The particles were characterized by X-ray diffraction, transmission electron microscopy, and magnetic measurements. The particles were found to be single-domain and superparamagnetic at room temperature. The synthesis was carried out in a water-soluble system. The particles were found to be stable in water for at least 6 months. The particles were found to be stable in water for at least 6 months. The particles were found to be stable in water for at least 6 months.*

4. Claim 36 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Moumen et al. above. The especially pertinent portions of Moumen et al. are pointed out in the preceding paragraph. While Moumen et al. may not disclose conducting their

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process at a temperature between 50 and 90°C, it would have been obvious to one skilled in the art at the time applicants' invention was made to do so to increase the rate of hydrolysis and/or condensation. It is well-settled that choice of a suitable or optimum temperature, absent a showing of criticality, is within the expected skill of a worker in the art. See In re Aller et al., 220 F. 2d 454; 105 USPQ 233.

5. Claims 21, 22 and 26 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Reetz et al. "Nanostrukturierte Metalloxidcluster . . .", Angewandte Chemie, Bd. 108, Nr. 18, 1996, Seiten 2228-2230; XP 002134516.

6. Claims 21-24, 26-30, 32-35, and 37-41 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Bonnemann et al. WO 96/17685, esp. Examples 5, 6 and 8-10.

7. Claim 36 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Bonnemann et al. above.

The especially pertinent portions of Bonnemann et al. are pointed out in the preceding paragraph. While Bonnemann et al. may not disclose conducting their process at a temperature between 50 and 90°C, it would have been obvious to one skilled in the art at the time applicants' invention was made to do so to increase the rate of hydrolysis and/or condensation. It is well-settled that choice of a suitable or optimum temperature, absent

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a showing of criticality, is within the expected skill of a worker in the art. See the above-cited Aller et al. decision.

8. Claims 42 and 44 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bonnemann et al. WO 96/17685 in view of Day et al. 4,197,187. The especially pertinent portions of Bonnemann et al. are pointed out in paragraph 6 above. While Bonnemann et al. don't specifically disclose incorporating their (metallic oxide or) metallic colloids into sol-gel supports, it would have been obvious to one skilled in the art at the time applicants' invention was made to use a sol-gel alumina of Day et al. Example as the support in the process of Bonnemann et al. in lieu of their carbon support to realize the advantages pointed out by Day et al. (column 4, lines 46-68) i.e., better selectivity and improved yields in use in hydrocarbon conversion. Note that Bonnemann et al. (page 6, lines 6-11) contemplate the use of metal oxide carriers.

9. The following is a quotation of the first paragraph of 35 U.S.C. § 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claims 21-25, 27-31 and 33-45 are rejected under 35 U.S.C. § 112, first paragraph, because the specification, while

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being enabling for amphiphilic betaines, cationic surfactants, anionic surfactants, nonionic surfactants and water-soluble polymers as the "water-soluble additive", does not reasonably provide enablement for water-soluble UV absorbers. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. Applicants disclose only the above-specified ingredients as possible stabilizers (specification page 6, line 19 - page 7, line 3); and water-soluble UV absorbers would not impart the stability required by applicants.

11. The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claim 39 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

Claim 39 recites a Markush group which is not considered proper for the reasons that it is indefinite as to scope and incomplete as to its membership in reciting "or" instead of --and--.

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13. In claim 26, line 2, "betains" should be changed to --betaines--; in claim 32, first line, "<sup>at</sup>betains" should be changed to --betaines--; and in claim 32, line 3, "<sup>en</sup>surfacants" should be changed to --surfactants--.

14. Claims 25, 31, 43 and 45 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. § 112 set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

15. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record doesn't disclose or fairly suggest the embodiments of applicants' process in which tin or its dichloride or tetrachloride is used, or in which applicants' colloids are incorporated into sol-gel materials prepared from tetramethoxysilane or mixtures thereof with the other stated tetraalkoxysilane(s).

16. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

17. The remaining references listed on the attached Form PTO-892 are cumulative to the references applied herein, and/or further show the state of the art.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Lovering whose telephone number is (703) 308-0443. The examiner can normally be reached on Mon.-Fri. from 7:30 A.M. to 4:00 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson, can be reached on (703) 308-2340. The fax phone number for this Group is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

R. Lovering:cdc  
September 23, 2002

*Richard D. Lovering*  
RICHARD D. LOVERING  
PRIMARY EXAMINER  
GROUP ~~400~~ 1700